

Work Order ID 133623 - 2

June-12-15 7:50:13 AM

Page 1

Item ID: D6020-160
 Revision ID:
 Item Name: Crosstube Material
 Start Date: 6/12/15 Start Qty: 23.00
 Required Date: 10/02/15 Req'd Qty: 23.00
 Reference:

Accept *N9000040100*
 Setup Start *NS1*
 Stop *NS2*

Cust Item ID:
 Customer:

2x 14x Split-1

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
 Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6020	pa5 A ✓								
110	PURCHASING	0.00							
110									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: 35800								
	Manufacture as per dwg D6020								
120	Receive & Inspect for Damage & Mat'l Certs	0.00							
120									
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								
130	QC6- Inspect dimensions to drawing	0.00							
130									
QC	Memo	0.00							
Quality Control	Ensure Material certification comply to Dwg								

CY 15/06/12 28

8x SP 16-01-14

⑧

DAS
38
9-89

JAN 25 2016

Work Order ID 133623

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Page 2

Item ID: D6020-160 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Crosstube Material
 Start Date: 6/12/15 Start Qty: 23.00 *23* Cust Item ID:
 Required Date: 10/02/15 Req'd Qty: 23.00 *23* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* Outsource1 Outsource process - Heat Treat	Memo Issue p/o: _____ Ensure Material certification	0.00 0.00	N/A						
150 *150* Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Memo Ensure Material certification	0.00 0.00							
160 *160* QC Quality Control	QC6- Inspect dimensions to drawing Memo	0.00 0.00							

DAS
9
9-89

Work Order ID 133623

133623

Page 3

June-12-15 7:50:13 AM

Item ID: D6020-160

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Crosstube Material

Start Date: 6/12/15 Start Qty: 23.00

23

Cust Item ID:

Required Date: 10/02/15 Req'd Qty: 23.00

23

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

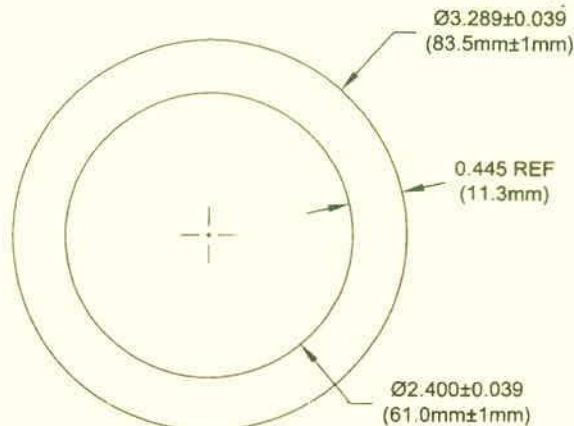
Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Identify as per dwg & Stock Location: <i>HALL</i>	0.00							
190									
Packaging	Memo	0.00							
Packaging									
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.00							
Quality Control									

TW 16-03-28

MLJ MAR 29 2016

A 16-3-17

SPECIFICATION CONTROL DRAWING



10133623

NOTES

1) D6020-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 160" LONG TUBE: D6020-160

2) MATERIAL: 17-4PH SEAMLESS STAINLESS STEEL TUBE PER ASTM A564
Ø3.289 O.D. x Ø2.400 I.D.

HEAT TREAT TO H1025 CONDITION (HRC 34-42).
MIN. ULTIMATE TENSILE STRENGTH = 155 ksi
MIN. YIELD TENSILE STRENGTH = 145 ksi

3) TOLERANCES ARE AS FOLLOWS:
ECCENTRICITY: 15% (+/-0.066" WALL)
LENGTH: XXX +0.188"/-0.000"
STRAIGHTNESS: 0.012" DEVIATION / 12" LENGTH

4) ALL DIMENSIONS ARE IN INCHES

5) TUBE MUST BE PICKLED OR ELECTROPOLISHED TO BE SMOOTH AND FREE FROM SCALE

6) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

RELEASED
2013-08-14

REV.	NEW ISSUE	DESCRIPTION	CP	13.04.24
BY	DATE			
DESIGN			DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN				
CHECKED		DRAWING NO.	REV. A	
MFG. APPR.		D6020	SHEET 1 OF 1	
APPROVED		TITLE	SCALE	
DE APPR.		CROSSTUBE MATERIAL	NTS	
DATE	13.04.24	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS RELEASED UNDER THE CONDITIONS OF THE CANADIAN PATENT ACT AND IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.		

6/17/15

STATEMENT OF CONFORMANCE

Dart Aerospace Ltd.
1270 Aberdeen
Hawkesbury, ON K6A 1K7

Part #: D6020-160P
Material: 17-4 PH
Report Serial #: See Table below
Heat #: See Table below
Drawing #: D6020 Rev. A
P.O #: PO28800 L/I 1
THI WO#: 150623/01
Qty: 8

Material Cert Report Serial Number:	Heat #:	Serial Number:
DNK-0066998-G22190-81203	G22190	2, 3
DNK-0066998-G22260-81249	G22260	8, 9, 10
DNK-0066998-G22575-81202	G22575-NJAGKF	15, 19
DNK-0066998-G22575-81386	G22575-NJAGHX	21

The above-mentioned parts have been inspected and conform to customer contract, purchase order, drawing, and other required specifications. All exceptions are noted below. Inspection data and all certifications are kept on file and available for review upon customer request.

Comments: This is a partial shipment of this PO.
Lengths of SN 15 - 160.8", SN 19 - 161.05", SN 21 - 160.6"

Inspected / Certified By:



Christine Plummer, Quality Dept. January 8, 2016

TUBE HOLLOWS INTERNATIONAL

PACKING LIST

Packlist ID: 01586
Date: 1/8/2016
Page: 1

39 ENTERPRISE DRIVE
SUITE 2
WINDHAM, ME 04062
PHONE: 207-892-8899 FAX: 207-892-8863

Sold To Address

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY K6A 1K7
CANADA

Ship To Address

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY K6A 1K7
CANADA

			CUSTOMER PO	. PAYMENT TERMS		F.O.B.
			28800	Net 30		WINDHAM
SALES REP ID			SHIPPING METHOD	SHIP DATE	OUR ORDER NUMBER	
EVAN			JOURNEY FREIGHT	1/8/2016	DAR150141	
QUANTITY						
ORD	SHP	BCK	CUSTOMER PART ID	DESCRIPTION		

21.00 8.00 6.00 CROSSTUBE

160" CROSSTUBE
Drawing: D6020-160P
Rev No:
Unit of Measure: EA

8 PIECES OF THI SUPPLIED 17-4 MATERIAL, MACHINED
PER DRAWING # D6020 REV. A.

S/N 2, 3, 8, 9, 10, 15, 19, 21

RE: THI WO# 150623/01

THANK YOU FOR THIS ORDER.

TOLERANCES ARE AS FOLLOWS:
ECCENTRICITY: 15% (+/-0.066" WALL).
LENGTH: XXX +0.188"/0.000".
STRAIGHTNESS: 0.012" DEVIATION / 12" LENGTH.

Rev No:

RECEIVED BY: _____

SP16-01-14

Material Certification

MILL ORDER: 0066998
PART NUMBER: 72313.BO
P.O. NUMBER: 354505
SERIAL NUMBER: DNK-0066998-G22190-81203

Certificate of Conformance - Part 1 of 2

Part 1 - PAGE NUMBER: 1 of 1

P.O. DATE: 9/8/2015

PRINTED: 11/23/15 08:41

S A. M. CASTLE & CO.
O T 1420 KENSINGTON ROAD
L O SUITE 220
D OAK BROOK, IL 60523

S A.M. CASTLE & CO.
H T 299 CANAL ROAD
I O
P FAIRLESS HILLS, PA 19030

Material Description: STAINLESS STEEL ROUND BAR 17-4 EAF+AOD SOLUTION TREATED & AGED COND H1025 ROUGH TURNED ASTM A564-13 (type 630 condition H1025)

Size: 3.5000 DIAM X 160.0000 CUT-TO-LENGTH

Heat Number	TOP	Wt	C	MN	SI	S	P
G22190			0.031	0.72	0.34	0.001	0.025
			CR 15.27	W <0.05	V 0.08	NI 4.17	MO 0.22
			CO 0.05	CU 3.23	SN 0.012	PB	CB 0.25
			TA <0.01	AL <0.01	TI <0.01	FE	B 0.001
			O	MG	CA	SE	ZR
			AG	BI	N 0.026	H	CQ

HARDNESS: 373 HBW

HARDNESS1 35.61 HRC

TENSILE: DIR. T/S KSI 0.2% Y/S KSI %EL %R/A
LONG. 172.3 167.6 12.68 55.11

MACRO ETCH TEST: ACCEPTABLE

THIS MATERIAL WAS SOLUTION TREATED AT A TEMPERATURE OF 1900 °F/1 HR/AC + 1025 °F/4 HRS/AC

/S/ Amy Giordano

/S/ Miles Voigt

Date: 11/23/15

Prepared by: Amy Giordano

Miles Voigt, Lab Supervisor

Melted and manufactured in compliance with DFARS 252.225-7009 ALT I. Melted and chemistry tested by USAP in Bridgeville, PA., USA. Material Manufactured in USA. Certification IAW DIN 50 049/EN 10204 3.1. Material complies with EU directive 2002/95/EC (RoHS). The test results shown are certified to be a correct statement of records that were derived from testing samples of the material. Results meet applicable specifications. No welding was performed on the material supplied on this order. Material is free from mercury contamination. Material is of NAFTA origin. This material was produced under the Dunkirk Specialty Steel Quality Management System documented in QP Manual, Rev. 10 dated 3/11/2015, conforming to NCA-3800. Material testing was performed as applicable in accordance with ASTM A370, A604, E8, E10, E18, E23, E45, E112, E139, E381, E572, E1019, STP-CHEM-GDS, E1444, & AMS 2315. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal Law, Title 18, Chapter 47. Test results are maintained in company records. This certification shall not be produced, except in full, without written approval of Dunkirk Specialty Steel. Material is free from Radioactive Contamination. Safety Data Sheets (SDS) are available at www.univstainless.com. If applicable: Decarb test - furnace atmosphere is Argon; Corrosion Test (ASTM A262 Practice A) - Etchant used -10% Oxalic Acid; Microstructure @ magnification 250 - 500X. Stress Rupture, Bending Test (ASTM 384), and Microcleanliness tests performed by Westmoreland Testing Laboratory or Element Materials Technology. Impact Testing and Corrosion Test (ASTM A262 Practice E) performed by the NSL Testing Laboratory, Westmoreland Testing Lab or Element Materials Technology. Unless otherwise stated, Percentage Elongation is measured in 4D. Speed of Testing: 0.005 in/in/min.; 0.05 in/in/min.

Material Certification

MILL ORDER: 0066998

PART NUMBER: 72313.BO

P.O. NUMBER: 354505

SERIAL NUMBER: DNK-0066998-G22260-81249

Certificate of Conformance - Part 1 of 2

P.O. DATE: 9/8/2015

Part 1 - PAGE NUMBER: 1 of 1

PRINTED: 11/24/15 09:39

S A. M. CASTLE & CO.
O T 1420 KENSINGTON ROAD
L O SUITE 220
D OAK BROOK, IL 60523

S A.M. CASTLE & CO.
H T 299 CANAL ROAD
I O
P FAIRLESS HILLS, PA 19030

Material Description: STAINLESS STEEL ROUND BAR 17-4 EAF+AOD SOLUTION TREATED & AGED COND H1025 ROUGH TURNED ASTM A564-13 (type 630 condition H1025),

Size: 3.5000 DIAM X 160.0000 CUT-TO-LENGTH

Heat Number	TOP	W%	C	0.029	MN	0.72	SI	0.25	S	0.002	P	0.023
G22260			CR	15.38	W	<0.05	V	0.07	NI	4.24	MO	0.23
			CO	0.05	CU	3.24	SN	0.013	PE		CB	0.23
			TA	<0.01	AL	<0.01	TI	<0.01	FE		B	0.001
			O		MG		CA		SE		ZR	
			AG		BI		N	0.040	H		CQ	

HARDNESS: 344 HBW

HARDNESS: 37 HRC

TENSILE: DIR. T/S KSI 0.2% Y/S KSI %EL %R/A
LONG. 167.1 162.4 14.69 58.0

MACRO ETCH TEST: ACCEPTABLE

THIS MATERIAL WAS SOLUTION TREATED AT A TEMPERATURE OF 1900 °F/1 HR/AC + 1025 °F/4 HRS/AC

/S/Amy Giordano

/S/Miles Voigt

Date: 11/24/15

Prepared by: Amy Giordano

Miles Voigt, Lab Supervisor

Melted and manufactured in compliance with DFARS 252.225-7009 ALT 1. Melted and chemistry tested by USAP in Bridgeville, PA., USA. Material Manufactured in USA. Certification LAW DIN 50 049/EN 10204 3.1. Material complies with EU directive 2002/95/EC (RoHS). The test results shown are certified to be a correct statement of records that were derived from testing samples of the material. Results meet applicable specifications. No welding was performed on the material supplied on this order. Material is free from mercury contamination. Material is of NAFTA origin. This material was produced under the Dunkirk Specialty Steel Quality Management System documented in QP Manual, Rev. 10 dated 3/11/2015, conforming to NCA-3800. Material testing was performed as applicable in accordance with ASTM A370, A604, E8, E10, E18, E23, E45, E112, E139, E381, E572, E1019, STP-CHEM-GDS, E1444, & AMS 2315. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal Law, Title 18, Chapter 47. Test results are maintained in company records. This certification shall not be produced, except in full, without written approval of Dunkirk Specialty Steel. Material is free from Radioactive Contamination. Safety Data Sheets (SDS) are available at www.univstainless.com. If applicable: Decarb test - furnace atmosphere is Argon; Corrosion Test (ASTM A262 Practice A) - Etchant used -10% Oxalic Acid; Microstructure @ magnification 250 - 500X. Stress Rupture, Bending Test (ASTM 384), and Microcleanliness tests performed by Westmoreland Testing Laboratory or Element Materials Technology. Impact Testing and Corrosion Test (ASTM A262 Practice E) performed by the NSL Testing Laboratory, Westmoreland Testing Lab or Element Materials Technology. Unless otherwise stated, Percentage Elongation is measured in 4D. Speed of Testing: 0.005 in/in/min.; 0.05 in/in/min.

MILL ORDER: 0066998

PART NUMBER: 72313.BO

P.O. NUMBER: 354505

SERIAL NUMBER: DNK-0066998-G22575-81202

Certificate of Conformance - Part 1 of 2

P.O. DATE: 9/8/2015

Part 1 - PAGE NUMBER: 1 of 1

PRINTED: 11/23/15 08:38

S A. M. CASTLE & CO.
O T 1420 KENSINGTON ROAD
L O SUITE 220
D
OAK BROOK, IL 60523

S A. M. CASTLE & CO.
H T 299 CANAL ROAD
I O
P
FAIRLESS HILLS, PA 19030

Material Description: STAINLESS STEEL ROUND BAR 17-4 EAP+AOD SOLUTION TREATED & AGED COND H1025 ROUGH TURNED ASTM A564-13 (type 630 condition H1025),

Size: 3.5000 DIAM X 160.0000 CUT-TO-LENGTH

Heat Number	TOP	Wt%	C	0.032	MN	0.79	SI	0.38	S	<0.001	P	0.022
G22575			CR	15.54	W	<0.05	V	0.07	NI	4.34	MO	0.27
			CO	0.05	CU	3.30	SN	0.009	PB		CB	0.24
			TA	<0.01	AL	0.08	TI	<0.01	FE		B	0.001
			O		MG		CA	0.001	SE		ZR	
			AG		BI		N	0.033	H		CQ	

HARDNESS: 348 HBW

HARDNESS: 34.9 HRC

TENSILE: DIR. T/S KSI 0.2% Y/S KSI %EL %R/A
LONG. 168.0 163.9 15.36 61.42

MACRO ETCH TEST: ACCEPTABLE

MATERIAL ID: NJAGKF

THIS MATERIAL WAS SOLUTION TREATED AT A TEMPERATURE OF 1900 °F/1 HR/AC + 1025 °F/4 HRS/AC

/S/ Amy Giordano
Amy Giordano
Prepared by: Amy Giordano

/S/ Miles Voigt
Miles Voigt
Miles Voigt, Lab Supervisor

Date: 11/23/15

Melted and manufactured in compliance with DFARS 252.225-7009 ALT 1. Melted and chemistry tested by USAP in Bridgeville, PA., USA. Material Manufactured in USA. Certification IAW DIN 50 049/EN 10204 3.1. Material complies with EU directive 2002/95/EC (RoHS). The test results shown are certified to be a correct statement of records that were derived from testing samples of the material. Results meet applicable specifications. No welding was performed on the material supplied on this order. Material is free from mercury contamination. Material is of NAFTA origin. This material was produced under the Dunkirk Specialty Steel Quality Management System documented in QP Manual, Rev. 10 dated 3/11/2015, conforming to NCA-3800. Material testing was performed as applicable in accordance with ASTM A370, A604, E8, E10, E18, E23, E45, E112, E139, E381, E572, E1019, STP-CHEM-GDS, E1444, & AMS 2315. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal Law, Title 18, Chapter 47. Test results are maintained in company records. This certification shall not be produced, except in full, without written approval of Dunkirk Specialty Steel. Material is free from Radioactive Contamination. Safety Data Sheets (SDS) are available at www.univstainless.com. If applicable: Decarb test - furnace atmosphere is Argon; Corrosion Test (ASTM A262 Practice A) - Etchant used -10% Oxalic Acid; Microstructure @ magnification 250 - 500X. Stress Rupture, Bending Test (ASTM 384), and Microcleanliness tests performed by Westmoreland Testing Laboratory or Element Materials Technology. Impact Testing and Corrosion Test (ASTM A262 Practice E) performed by the NSL Testing Laboratory, Westmoreland Testing Lab or Element Materials Technology. Unless otherwise stated, Percentage Elongation is measured in 4D. Speed of Testing: 0.005 in/in/min.; 0.05 in/in/min.



Dunkirk Specialty Steel, LLC.
830 Brigham Road | Dunkirk, NY 14048
(716) 366-1000



Materials Testing Laboratory
Heat Treating

Material Certification

MILL ORDER: 0066998
PART NUMBER: 72313.80
P.O. NUMBER: 354505
SERIAL NUMBER: DNK-0066998-G22575-81386

Certificate of Conformance - Part 1 of 2
P.O. DATE: 9/8/2015

Part 1 - PAGE NUMBER: 1 of 1
PRINTED: 12/3/15 08:46

RECERTIFICATION - ADDED MATERIAL ID NUMBER

S A. M. CASTLE & CO.
O T 1420 KENSINGTON ROAD
L O SUITE 220
D OAK BROOK, IL 60523

S A.M. CASTLE & CO.
H T 299 CANAL ROAD
I O
P FAIRLESS HILLS, PA 19030

Material Description: STAINLESS STEEL ROUND BAR 17-4 EAF+AOD SOLUTION TREATED & AGED COND H1025 ROUGH TURNED ASTM A564-13 (type 630 condition H1025)

Size: 3.5000 DIAM X 160.0000 CUT-TO-LENGTH

Heat Number	TOP	Wt	C	0.032	MN	0.79	SI	0.38	S	<0.001	P	0.022
G22575			CR	15.54	W	<0.05	V	0.07	NI	4.34	MO	0.27
			CO	0.05	CU	3.30	SN	0.009	FE		CB	0.24
			TA	<0.01	AL	0.08	TI	<0.01	FE		B	0.001
			O		MG		CA	0.001	SE		ZR	
			AG		BI		N	0.033	H		CQ	

HARDNESS: 348 HBW

HARDNESS1 35.8 HRC

TENSILE: DIR. T/S KSI 0.2% Y/S KSI %EL %R/A
LONG. 172.6 168.3 13.46 58.25

MACRO ETCH TEST: ACCEPTABLE

MATERIAL ID: NJAGHX

THIS MATERIAL WAS SOLUTION TREATED AT A TEMPERATURE OF 1900 °F/1 HR/AC + 1025 °F/4 HRS/AC

/S/Amy Giordano

/S/Kevin Seidel

Date: 12/03/15

Prepared by: Amy Giordano

Kevin Seidel, Technical Mgr.

Melted and manufactured in compliance with DFARS 252.225-7009 ALT 1. Melted and chemistry tested by USAP in Bridgeville, PA., USA. Material Manufactured in USA. Certification IAW DIN 50 049/EN 10204 3.1. Material complies with EU directive 2002/95/EC (RoHS). The test results shown are certified to be a correct statement of records that were derived from testing samples of the material. Results meet applicable specifications. No welding was performed on the material supplied on this order. Material is free from mercury contamination. Material is of NAFTA origin. This material was produced under the Dunkirk Specialty Steel Quality Management System documented in QP Manual, Rev. 10 dated 3/11/2015, conforming to NCA-3800. Material testing was performed as applicable in accordance with ASTM A370, A604, E8, E10, E18, E23, E45, E112, E139, E381, E572, E1019, STP-CHEM-GDS, E1444, & AMS 2315. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal Law, Title 18, Chapter 47. Test results are maintained in company records. This certification shall not be produced, except in full, without written approval of Dunkirk Specialty Steel. Material is free from Radioactive Contamination. Safety Data Sheets (SDS) are available at www.univstainless.com. If applicable: Decarb test - furnace atmosphere is Argon; Corrosion Test (ASTM A262 Practice A) - Eluant used -10% Oxalic Acid; Microstructure @ magnification 250 - 500X. Stress Rupture, Bending Test (ASTM 384), and Microcleanliness tests performed by Westmoreland Testing Laboratory or Element Materials Technology. Impact Testing and Corrosion Test (ASTM A262 Practice E) performed by the NSL Testing Laboratory, Westmoreland Testing Lab or Element Materials Technology. Unless otherwise stated, Percentage Elongation is measured in 4D. Speed of Testing: 0.005 in/in/min.; 0.05 in/in/min.

EXTRUSION INSPECTION SHEET



TUBE #	TOTAL LENGTH	SIDE A		SIDE B		Measurement unit		Inches	Symbol	"	ULTRA SONIC MEASUREMENTS						
		DIA		DIA		INSIDE DIA	wall thickness measured w/vern				Strightness at 12" in middle	Rockwell Reading	LOCATION on tube	R1	R2	R3	R4
		R1	R2	R1	R2												
DWG											N/A	Middle	N/A				
1											N/A	Middle					
2											N/A	Middle					
3											N/A	Middle					
4	160.25	3.306	3.307	3.306	3.311	2.372	.472	.469			N/A	Middle	.458	.462	.467	.460	
5	160.40	3.307	3.301	3.307	3.313	2.364	.466	.480			N/A	Middle	.458	.460	.463	.462	
6											N/A	Middle					
7											N/A	Middle					
8											N/A	Middle					
9											N/A	Middle					
10											N/A	Middle					
11											N/A	Middle					
12											N/A	Middle					
13											N/A	Middle					
14											N/A	Middle					
15											N/A	Middle					
16											N/A	Middle					
PART #		D6020-160				P/O#		28800		BATCH #		133623		Notes:			